

DTIC/TR-85/13

*AN ANALYSIS OF PROPOSED ALTERNATIVES  
TO THE  
DEFENSE TECHNICAL INFORMATION CENTER'S  
ANNOUNCEMENT PRODUCTS AND SERVICES*

*OCTOBER 1985*

DIRECTORATE OF DATABASE SERVICES  
DEFENSE TECHNICAL INFORMATION CENTER  
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<p>Currently, the Defense Technical Information Center (DTIC) offers its users information about new reports entered into the DTIC database through: the Defense RDT&amp;E Online System (DROLS), the Current Awareness Bibliography (CAB) service and the Technical Abstract Bulletin (TAB). However, the decrease in the number of TAB subscribers, the decreasing usefulness of TAB and its unavailability to many DTIC users are matters of grave concern and force DTIC to look at possible replacements for TAB. In the future, when the vast majority of DTIC users have their own terminals, the need for paper-based announcement products may be eliminated. However, until that time, DTIC must continue to produce print products. Therefore, the authors recommend that the following actions be taken:</p> <ol style="list-style-type: none"> <li>1. DTIC should discontinue the publication of TAB.</li> <li>2. DTIC should publish an unclassified, limited, monthly, comprehensive acquisitions list with indexes. The citations in the list would not contain abstracts or subject terms. A subject list would not be offered.</li> </ol>					
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19. 3. DTIC should publish semiannual and annual cumulative indexes to the list.

4. DTIC should encourage those users who need subject access to DTIC's new acquisitions to enroll in the CAB program where they can develop a profile specifically tailored to their needs.

5. DTIC should publish the Notices of Changes in Classification, Distribution and Availability as a separate document on a quarterly basis with the fourth quarter being an annual cumulation.



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## EXECUTIVE SUMMARY

Currently, the Defense Technical Information Center (DTIC) offers its users information about new reports entered into the DTIC database through: the Defense RDT&E Online System (DROLS), the Current Awareness Bibliography (CAB) service and the Technical Abstract Bulletin (TAB).

However, the steady decrease in the number of TAB subscribers, the decreasing usefulness of TAB and its unavailability to many DTIC users are matters of grave concern and force DTIC to look at possible replacements for TAB. In the future, when the vast majority of DTIC users have their own terminals, the need for paper-based announcement products may be eliminated. However, until that time, DTIC must continue to produce print products. Therefore, the committee recommends that the following actions be taken until all announcement information can be provided electronically.

- a. DTIC should discontinue the publication of TAB.
- b. DTIC should publish an unclassified, limited, monthly, comprehensive acquisitions list with indexes. The citations in the list would not contain abstracts or subject terms. A subject index would not be offered. The purpose of the list would be to give the intermediary a reference and ordering tool. It is also recommended that the monthly list and indexes be published in hard copy.
- c. DTIC should publish semiannual and annual cumulative indexes to the list on microfiche.
- d. DTIC should encourage those users who need subject access to DTIC's new acquisitions to enroll in the CAB program where they can develop a profile specifically tailored to their needs.
- e. DTIC should publish the Notices of Changes in Classification, Distribution and Availability as a separate document on a quarterly basis with the fourth quarter being an annual cumulation.



## INTRODUCTION

Department of Defense (DoD) Directive 3200.12 assigns the Defense Technical Information Center (DTIC) the responsibility for "providing prompt and effective document awareness services and publications reflecting new acquisitions in the document collection."<sup>1</sup> At the present time, DTIC offers the following services and publications in order to fulfill this requirement:

1. Defense RDT&E Online System (DROLS). Users who have access to DROLS can use the command Search New Acquisitions (@SNA@) to limit their search to just those documents that have been added to the Technical Reports Database during the previous two-week period. Thus, online users can learn about DTIC's most recent acquisitions quickly, and can develop their own announcement and current awareness products, if they wish to do so. The vast majority of people who use DROLS are intermediaries.

2. Current Awareness Bibliography (CAB). CAB is a customized, automatic service based upon a user's recurring subject needs. A subject interest profile composed of fields and groups, subject terms or a combination of both is developed for the user and then matched against the newly acquired documents in the Technical Reports Database. The end product is a personalized bibliography that is sent to the user on a biweekly basis. Users may also receive any or all of the seven indexes that are available; most CABs are small enough so that very few users request indexes. This service is geared to the end user, the individual who wants to keep abreast of developments in his field, but does not have the time or interest to scan a large, comprehensive document for the few citations that may be of interest to him.

3. Technical Abstract Bulletin (TAB). TAB is a biweekly (classified Confidential) publication that announces the availability of the latest limited

and classified documents that have been acquired by DTIC. Seven indexes are included under the same cover. An annual cumulation of the indexes is available on microfiche. DTIC's unclassified/unlimited (U<sup>2</sup>) reports are announced in the National Technical Information Service (NTIS) publication Government Reports Announcements & Index (GRA&I).

TAB is a publication that is used primarily by intermediaries as an acquisitions, ordering, reference, cataloging and indexing tool. Some consult TAB to develop search strategies before going online. Before it was classified, many intermediaries ordered multiple copies of TAB and circulated them throughout their organization. Since TAB has been classified, however, its use as a current awareness/browsing tool has been severely curtailed.

The classification of TAB has also caused several other problems:

a. When TAB was classified in January 1983 DTIC rapidly lost ". . .almost 700 TAB subscribers from the list of 2,281 receiving organizations because they did not have facility clearances/classified contracts registered with us."<sup>2</sup> As of 5 April 1985, 1,234 users were receiving TAB, out of total of 3,333 users<sup>3</sup> (See Table 1).

The primary reason for this decline is that approximately one-third of DTIC's users do not have facility clearances and, therefore, are not eligible to receive TAB. Of the users who do have facility clearances, almost 46 percent do not subscribe to TAB either because they have access to DROLS or because they do not want to bother with the inconveniences and restrictions that a classified TAB imposes.

It is interesting to note that since the number of TAB subscribers has decreased, the steady growth of demand technical reports shipped has abruptly stopped and slightly declined despite the fact that online access and CAB have continued to expand (See Figures 1, 2, and 3). The fact that fewer people have access to a readily accessible print product appears to be taking its toll.

Table 1

NUMBER OF TAB SUBSCRIBERS

<u>Date</u>	<u>Number of Subscribers</u>
*December 1982	2,281
*January 1983	1,595
**July 1984	1,409
**November 1984	1,330
**February 1985	1,275
**April 1985	1,234

Source:

\*Ellen McCauley, Study of Announcement Alternatives - Progress Report  
(1983): 1.

\*\*Information supplied by DTIC-DDRB

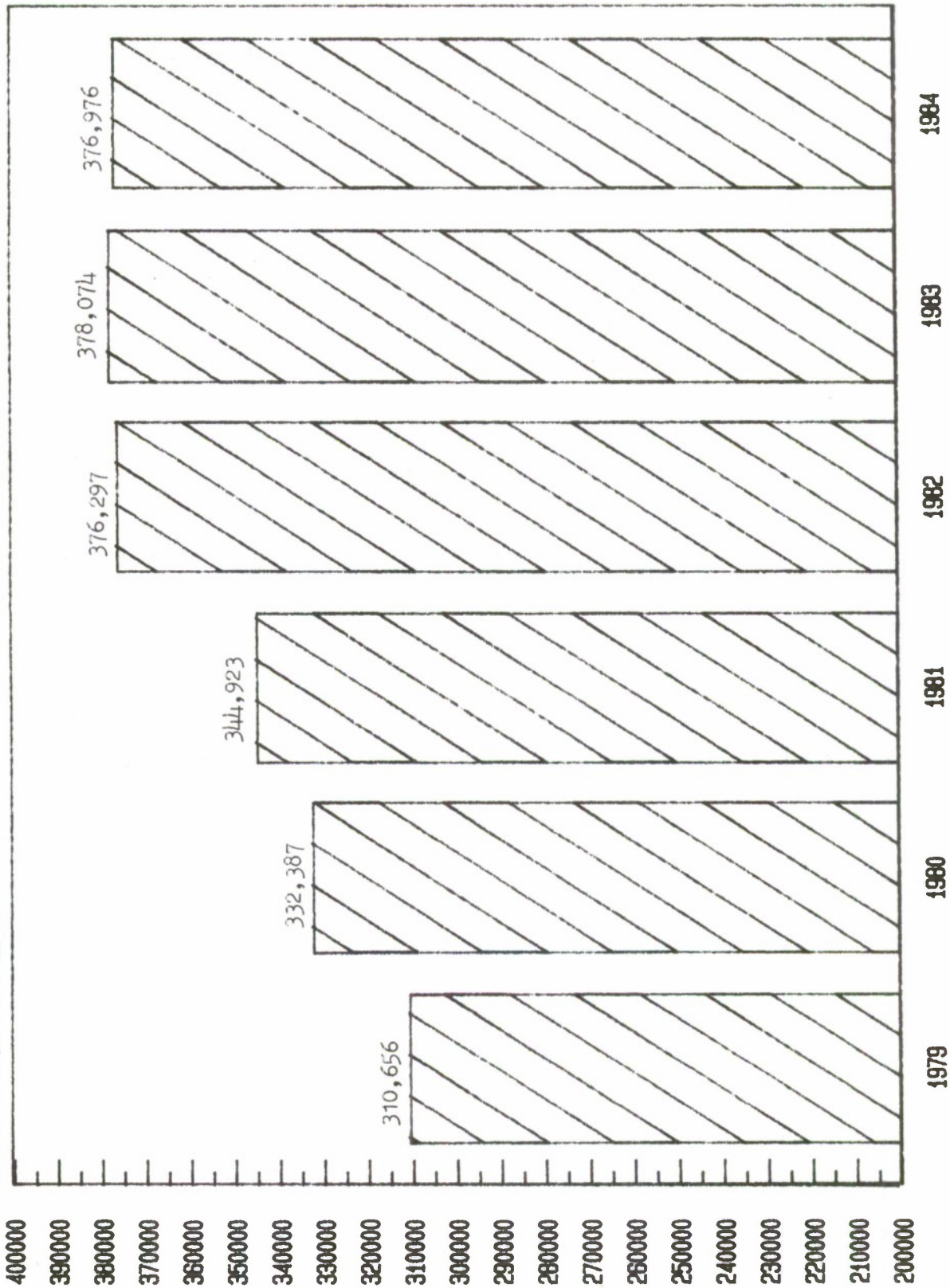


Figure 1

# DEMAND TECHNICAL REPORTS SHIPPED

(DOES NOT INCLUDE SBIR)

number of reports shipped



fiscal year

Source:

Defense Technical Information Center, Office of Planning and Management,  
Summary Management Data Report, (FY1979-FY1984)

# ONLINE ACCESS

Remote Terminals

Number of Remote Terminals

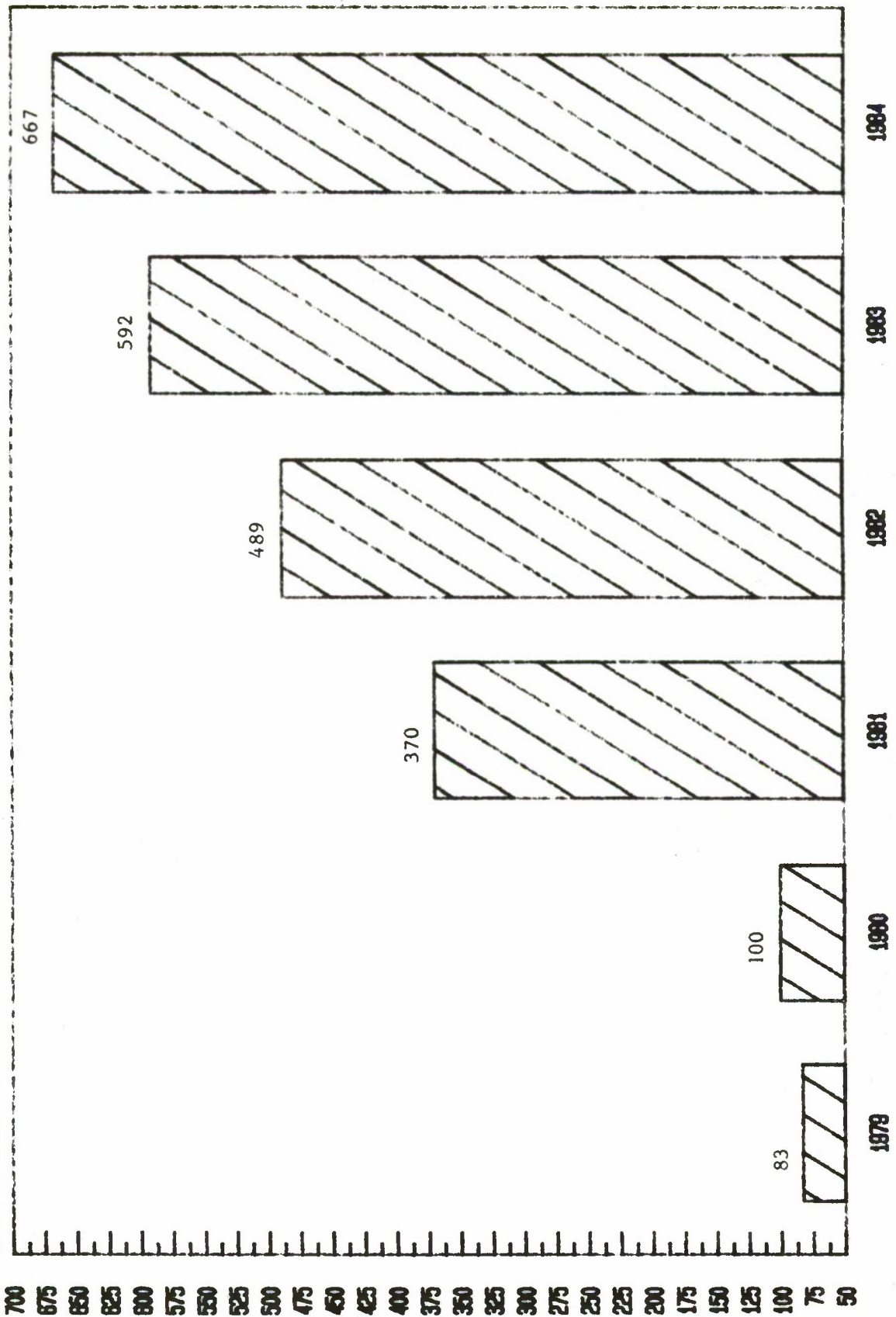


Figure 2

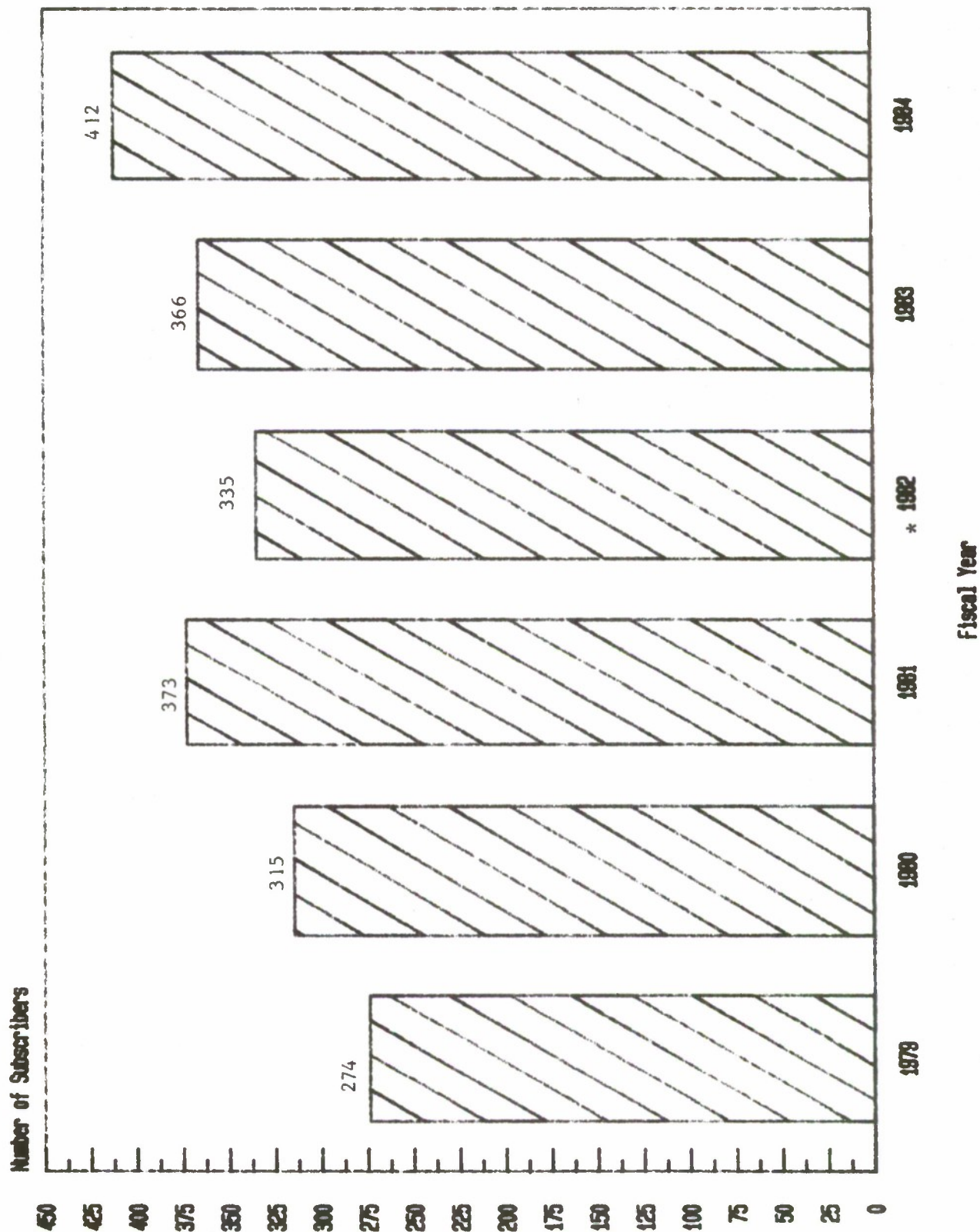
Source:

Defense Technical Information Center, Office of Planning and Management,  
Summary Management Data Report, (FY1979-FY1984)



# CURRENT AWARENESS BIBLIOGRAPHY SERVICE

Figure 3



\*Moratorium declared on new CAB subscribers. Recertification program instituted.

## Source:

Defense Technical Information Center, Office of Planning and Management,  
Summary Management Data Report, (FY1979-FY1984)



b. TAB no longer reaches users in a timely fashion. Keeping to the TAB production cycle has always been a problem. This problem has been exacerbated since TAB's classification. Because TAB is now classified, it must be double-wrapped and sent by certified mail. These procedures are more time-consuming than the procedures involved in handling unclassified mail, and contribute to DTIC's not getting TAB out on time. Now, there is also often an additional delay at the user's site because of the clearance and document control procedures which govern the control of classified materials in most organizations. These procedures delay, if not actually curtail, patron access.

c. Classified materials are kept under lock-and-key, and in some organizations are actually located in another building; thus, TAB is no longer easily accessible. Many librarians who used to order multiple copies of TAB and circulate them to their patrons can no longer do this. Now, as one librarian reported, "only the really faithful" come to the library to use TAB. At the U.S. Army War College the staff is so concerned about this problem that they are discussing other current awareness methods that they could develop now that TAB is classified.

For the few intermediaries who work in areas that are in effect "vaults," the fact that TAB is classified has made little or no difference at all. They can keep TAB out on the shelves, and since all their patrons have security clearances, there is no concern with verifying each person's eligibility for access to TAB. However, most intermediaries do not work in that type of environment and therefore find that a classified TAB is far less convenient to use.

The unavailability of TAB to one-third of DTIC's users, the steady decrease in the number of TAB subscribers, and the decreasing usefulness of TAB as a current awareness tool for the end user have made TAB a much less effective publication than it was in the past. Ellen McCauley, DTIC-AE, did a study of alternatives to TAB in 1983, the DoD Scientific and Technical Information Program (STIP) Committee formed a Working Group on DTIC Announcement Media in 1984 and our committee was tasked in May 1984 to also look at DTIC's announcement products and services. In our report of October 1984, we recommended that DTIC discontinue the publication of TAB and seek alternative approaches for satisfying the functions performed by TAB.

We recognized that there would be a severe impact on the print shop if TAB were discontinued. However, the status of DTIC's print shop has been problematical for some time. TAB accounts for 30 to 35 percent of the print shop's workload.<sup>4</sup> Without that workload the print shop would probably be downgraded from Class A to duplicating plant status, an estimated six to seven people would lose their jobs, and some of the print shop equipment would no longer be justified. In order to retain the staff at its present level, work would have to be obtained from other sources. Roughly 52 percent of DTIC's work now comes from the Defense Logistics Agency (DLA).<sup>5</sup> Perhaps more work could be done for DLA in the future.

In the October 1984 report we also noted that the cessation of TAB would have ramifications throughout the user community as well as within the Center. Many users have been receiving TAB for years. Although they may no longer use it as often as they did in the past, it has become a "tradition" and its loss would be unsettling. We suggested, therefore, that DTIC continue publishing TAB until it is ready to introduce its new announcement products.

If TAB were discontinued, then the section that contains the Notices of Changes in Classification, Distribution and Availability would have to be published as a separate document. Because the Notices are now contained in TAB, only those users who receive TAB have access to it. Making the Notices available to all users would constitute a significant improvement in DTIC services and should eliminate most of the inquiries that the Technical Reports Branch receive concerning classification, distribution and availability changes.

The current announcement services and products are summarized in Table 2.



TABLE 2

## PRESENT ANNOUNCEMENT PUBLICATIONS AND SERVICES

	TAB	DROLS	CAB
Frequency	Biweekly	Updated biweekly	Biweekly
Arrangement	Field/Group	N/A	AD number
Indexes	AD; Contract; Corp. Author-Monitoring Agency; Personal Author; Report No., Subject; Title Annual cumulation available	N/A	Same indexes as TAB but available only on request No cumulations available
Information Provided	Full bibliographic information Descriptors Abstract	Full bibliographic information Descriptors Identifiers Abstract	Full bibliographic information Descriptors Identifiers Abstract
Coverage	All subject areas Limited and classified reports	All subject areas U <sup>2</sup> , limited and classified reports	Selected subject areas (Profile based) U <sup>2</sup> , limited and classified reports
Security Classification	Classified Confidential	Unclassified or Classified	Unclassified
Cost	Free	\$20.00/connect hr for dial-up users	Free
User Group	Intermediaries Very few end users	Intermediaries Some end users	End users Some intermediaries

## DISCUSSION OF ALTERNATIVES

### 1. FORCE RELIANCE ON DROLS.

The number of users who have access to DROLS has increased steadily over the years (see Figure 2 on page 6). Indeed, it has been stated that DTIC in the year 2000 ". . . will be situated in an environment where all users have access to computer work stations . . . ."6 When this occurs, all users will be able to generate not only their own announcement and current awareness products, but they will also be able to do their own subject searches. Thus, the need for a printed announcement product, the CAB service and the demand bibliography service will disappear.

At the present time complete reliance on DROLS for announcement information is not practical. DROLS is available to only a small percentage of DTIC users who tend to be the major users of DTIC's products. However, DTIC's mission is not just to serve a handful of major DoD laboratories and contractors. Its announcement, awareness and reference services must reach out to all users. DROLS access also has some built-in restrictions. In fact, contractors who do not have a Confidential facility clearance are not permitted access to DROLS at all. Even within organizations that have DROLS, access is limited to a few individuals who act as intermediaries for the rest of the individuals within the organization. Furthermore, these people do not always find DROLS convenient to use. Frequently, the terminals needed are not readily available or accessible. Someone else maybe using the terminal or it may be located in a distant part of the building. Sometimes, the DROLS system may simply be down. In addition, DROLS is difficult to learn and remember, which deters casual end users.

The near term expansion capability of DROLS is limited. The present system could conceivably handle a mass influx of new users, but only if those users accessed the database rarely. For example, if all they did was to use the @SNA@

command then the impact on the system would be minimal. However, if everyone did subject searches as well, the system would quickly become saturated and its responsiveness could not be maintained. Furthermore, DTIC's training and hotline services would have to be expanded substantially in order to teach these new users how to access the system effectively. While the command @SNA@ is easy to learn, it is unrealistic to believe that people would be satisfied to being restricted to that use only and would not want to learn and use all the commands that are available.

## 2. PUBLISH A COMPREHENSIVE ACQUISITIONS LIST WITH INDEXES

The purpose of an unclassified comprehensive acquisitions list would be to provide the intermediary with an ordering, reference and acquisitions tool. This unclassified list of all DTIC's new acquisitions arranged by AD number would include for each citation all the information needed to complete a Request for Limited Documents (DTIC Form 55): AD number, classification, distribution statement, author's name, unclassified title, date, number of pages, originating activity and series number and the contract or grant number. It would include fields and groups but not abstracts or subject terms, since those are the data elements most likely to make a citation, or collection of citations, vulnerable to classification (See Appendix A for a sample page).

The acquisitions list would be accompanied by indexes designed to give the intermediary a variety of access points to the list. The following indexes would be offered: Corporate Author - Monitoring Agency Index, Title Index, Personal Author Index, Contract Index and Report Number Index. The citations in the indexes would contain AD numbers, unclassified titles and fields and groups (See Appendix B for sample pages).

A subject index would not be included because the purpose of the list would be to facilitate the verification of document orders by registered users, and not to facilitate subject searching. Intermediaries needing subject access to the content of the database would be referred to DTIC's Demand Products Branch (DTIC-TOD) where a search could be done for them. They would also be encouraged to set up CAB profiles which could be tailored to cover the range of their organization's interests. The profile developed by the intermediary would be, in all likelihood, much broader than the one developed by the typical CAB subscriber who is an end user. Persons with DROLS terminals already have a subject search capability readily at hand. In addition they can use the @SNA@ command to get a list of the newest acquisitions in their field.

The list and indexes could be published on a monthly basis. Intermediaries interviewed by the committee readily accepted the idea of a monthly list since it would give them fewer issues to check in and handle than the present TAB, but would still be timely enough to meet their needs. Quarterly publication was perceived as involving too great a time lag, particularly by users without access to DROLS. The intermediaries also favored semiannual and annual cumulations of the indexes.

It was suggested to the committee that the monthly acquisitions list be accompanied only by a report number and title index. However, conversations with intermediaries revealed that there is no consensus that these two indexes are the most valuable. Therefore, the committee would recommend that intermediaries be given all five indexes. The intermediaries interviewed also stated that they would want the acquisition list to appear in hard copy because hard copy is more convenient to use than microfiche. Intermediaries reluctantly acknowledged that the proposed semiannual and annual index cumulations would be acceptable in microfiche. At the present time, the annual TAB cumulation is available only in microfiche.



The advantages to such a comprehensive acquisitions list are:

a. Since the list would be unclassified, it would be available to all registered DTIC users. TAB is available only to those who have a facility clearance.

b. Only limited and classified reports are included in TAB while a comprehensive acquisitions list would also include citations to U<sup>2</sup> reports. Thus, it would serve as a single source of information for all new acquisitions. Users have wanted this inclusion of U<sup>2</sup> citations for a long time. For example, the Committee on Information Hang-Ups found a strong sentiment ". . . in favor of having all AD numbers appear in one publication"<sup>7</sup> when they examined the Defense Documentation Center (DDC) information services in 1975.

c. Libraries with limited budgets would particularly benefit from the inclusion of U<sup>2</sup> citations since, if they are only concerned with DTIC documents, they may no longer need to purchase GRA&I.

d. It would also be to DTIC's advantage to include U<sup>2</sup> citations. The resulting publication would more accurately reflect DTIC's workload and resources. It would also remind users that they can and should order U<sup>2</sup> reports from DTIC. Some mistakenly think that they can only order U<sup>2</sup> reports from the NTIS which is an unnecessary expenditure of DoD resources. NTIS would continue to announce U<sup>2</sup> documents. They serve a broader community which also needs to have access to DoD's technical reports.

e. Several of the acquisitions lists that are published by other major information centers contain an occasional article of interest to their users concerning changes in procedures, the development of new classes of service, the addition of certain types of materials, etc. The acquisitions list that DTIC publishes could also include this feature which would fill some of the void left by the cancellation of the DTIC Digest, and make users more aware of DTIC as an



organization that can provide valuable services to them. These few extra pages per issue would be a minimal marginal cost and yet would be of significant informational and promotional value. The disadvantage to such a list is that programming changes would have to be made so that the abstract and descriptor fields that presently appear in TAB would not appear in the acquisitions list. The preliminary pages for the list would either have to be printed onto the tape or included as a stored format in the Xerox 9700.

### 3. PROVIDE A TAILORED ANNOUNCEMENT PRODUCT ONLY

The CAB service could be expanded to include intermediaries. The advantages of CAB are:

a. CAB would save intermediaries valuable time since everything in it would pertain to their organization's area of interest.

b. Since CAB citations contain abstracts, descriptors and identifiers, intermediaries could use it for cataloging and indexing information, as an aid in composing search strategies and as backup to DROLS as well as for ordering, acquisitions and current awareness in those subject areas that are covered by the CAB profile.

The disadvantage of increasing the CAB program is that a large influx of users into the program would cause increased workloads in the Special Products and Terminology Branch (DTIC-TOS) and the Production Control Branch (DTIC-SOC). The impact could be mitigated, somewhat, in DTIC-TOS by providing them with clerical support and by upgrading the terminals they now use. DTIC-SOC would require one additional computer operator for the Xerox 9700 and one additional computer technician for output control. They would also require an additional Xerox 9700.

In our October report, the committee recommended that a separate program based on an organization's DD Form 1540 be set up to provide tailored announcements. However, after looking at our options more carefully, we have come to the conclusion that there really is no reason for DTIC to create a new program when the CAB service already fills this need. There would also be distinct disadvantages to this approach:

1. A tailored program based on a user's DD Form 1540 would require extensive programming.
2. DTIC would have to require that all registered users indicate their fields and groups of interest. At the present time, users with unclassified contracts do not always specify fields of interest.
3. Users have a great deal of flexibility in creating CAB profiles since they can use descriptors as well as fields and groups. Under a system based on the DD Form 1540, profiles would be limited to just fields and groups. Therefore, information centers that have a broader range of interest than that covered in their field and group certification would have to rely upon other means to obtain information about documents outside the scope of their profiles. Conversely, a center with broad field and group certification may wish to focus on narrower, more specific technical issues.

Another suggestion that was made was that we consider a tailored product based on a user's fields of interest rather than on his specific groups with a field. The major drawback to this approach is that the product would be much larger than a product based on fields and groups, and thus much more expensive to produce and to mail (See Table 3). Thus, the committee does not suggest that a product based solely on fields of interest be considered further.

Table 3

Comparison of the Total Number of COSATI Groups Users  
Would Receive If Announcement Was Based on COSATI Field Eligibility Only

User	Total No. of COSATI Groups User is Eligible For	Total No. of COSATI Groups User Would Receive If Entire Field Was Provided
A	1	6
B	3	21
C	4	20
D	5	11
E	5	22
F	7	27
G	7	38
H	8	17
I	8	19
J	9	35
K	10	11
L	13	76
M	13	56
N	14	88
O	14	39

Source: Dissemination Authority List. 1 Dec 84. Random sample.

The committee estimates that no more than 1000 users would want to subscribed to CAB if they received an acquisitions list. Quite a number of the intermediaries that we spoke with, especially online users, believe that an acquisitions list would be sufficient. However, if an acquisitions list was not available, then as many as 2000 users, the approximate number of subscribers who received TAB before it was classified, would probably wish to receive CAB.

#### 4. OTHER CONSIDERATIONS

Technology is rapidly changing and much research is being done on the use of floppy disks and digital video disks for information storage and retrieval. Both the National Library of Medicine (NLM) and NTIS are already offering subsets of their databases on floppy diskettes.<sup>8</sup> Although these media cannot be considered as alternatives to TAB at the present time, DTIC should begin exploring the possible applications of these technologies to its products and services.

#### 5. SUMMATION OF POSSIBLE ALTERNATIVES

Table 4 is an Effectiveness Matrix which shows how the user needs met by TAB and the present and proposed announcement products and services would fill the void that would be created by the elimination of TAB.



Table 4  
EFFECTIVENESS MATRIX

USER NEEDS	ANNOUNCEMENT PRODUCTS AND SERVICES				
	<u>TAB/TAB INDEXES</u> (Limited and classified reports only)	<u>DROLS</u>	<u>CAB</u> (Selected sub- jects only)	<u>PROPOSED</u> <u>ACQUISITIONS LIST</u>	<u>PROPOSED</u> <u>CUMULATIVE INDEXES</u>
Selection of materials suitable for a specific collection (Needed by intermediaries)	Yes	Yes	Yes	Limited (no subject access)	Limited (no subject access)
Verification of citations for the purpose of acquisitions (Needed by intermediaries)	Yes	Yes	Yes	Yes	Yes
Bibliographic information needed for ordering limited documents (Needed by intermediaries and end users)	Yes	Yes	Yes	Yes	No
Descriptive cataloging (Needed by intermediaries)	Yes	Yes	Yes	Yes	No
Aid in assigning index terms (Needed by intermediaries)	Yes	Yes	Yes	No	No

# EFFECTIVENESS MATRIX (cont)

## USER NEEDS

## ANNOUNCEMENT PRODUCTS AND SERVICES

	TAB/TAB INDEXES (Limited and classified reports only)	DROLS	CAB (Selected sub- jects only)	PROPOSED ACQUISITIONS LIST	PROPOSED CUMULATIVE INDEXES
Aid in developing search strategy before going on-line (Needed by intermediaries)	Yes	No	Yes	No	No
Reference - both compre- hensive and retrospec- tive (Needed by intermediaries and end users)	Yes	Yes	No	Yes	Yes
Backup when DROLS is down (Needed by intermediaries)	Yes	No	Yes	Limited (no subject access)	Limited (no subject access)
Current awareness (Needed by end user)	Yes	Yes	Yes	Limited (no subject access)	No

## DISCUSSION OF PRODUCTION METHODS

The committee investigated the advantages, disadvantages and associated costs for producing an acquisitions list and indexes in-house and on contract and for expanding the CAB program. The various production methods are discussed on the following pages. Costs are discussed in the next chapter.

### PRODUCTION OPTIONS FOR THE ACQUISITION LIST AND INDEXES

In-house Production on the Press, Xerox 1075 and on Microfiche. The advantage to producing the list and indexes in-house would be to offset some of the workload lost by the print shop due to the cessation of TAB. The disadvantage is that DTIC-S would have to format the tape. The Government Printing Office (GPO) formats the tape for TAB. In addition, DTIC-D believes that they would not be able to receive a waiver to produce 2000 copies of a master microfiche.

Contract Production. The advantage to producing the list and indexes on contract is that the contractor could handle everything from formatting the tape to mailing the product to our users. The disadvantage might be the contractor's ability to meet our time requirements.

### PRODUCTION METHOD FOR CAB

This product must be produced in-house, at DTIC, rather than on contract because:

- a. Each one is different from the other.
- b. Users enter and leave the system frequently.
- c. As a user's needs change, so does the product created for him.

CAB is produced on the Xerox 9700. The major advantage to using the Xerox 9700 is that each user package comes off the Xerox 9700 already sorted, labeled and ready to be mailed.

At the present time, the Xerox 9700 is run on three shifts, around-the-clock, five days a week (See Appendix C). Because of the large volume of data to be handled, the CAB program is run only in the evenings in order to avoid slowing down the online system. Overtime is sometimes needed to get TAB produced on time. If there should be a significant increase in the number of CAB profiles, substantial overtime would probably be necessary in order to get CAB out on time. Processing time on the UNIVAC 1100/82 would also become a matter of major concern. At the present time, two cycles of CAB are run each two-week TAB cycle. If two additional cycles were needed they would have to be scheduled on alternate weeks, so that four runs would not be required on the same biweekly schedule.

The due date for CAB would have to be extended by approximately five days because of the increased processing time that would be necessary. In addition, another Xerox 9700 would be needed in order to handle the additional workload. Since the Xerox 9700 handles everything that comes off the computer each day (except for special forms and initiation and termination dumps) an additional machine would help eliminate the print backlog.

It should be noted that DTIC-SOC has had the use of a Xerox 8700 since the last week in December 1984. However, the Xerox 8700 is about 20 percent slower than the Xerox 9700 and also has less input/output bin paper capacity. It is also not as reliable. Therefore, DTIC-SOC believes that an additional Xerox 9700 will, in fact, still be required.

The increased workload would also require the addition of one computer operator for the Xerox 9700 and one additional computer technician for output control (See Appendix D).



## ECONOMIC ANALYSIS

1. OBJECTIVE: DTIC's long-range goal is to have DTIC users use DROLS for the announcement of new acquisitions. The objective of this analysis is to examine the economics of the intermediate alternatives to announce new acquisitions in DTIC.

2. BACKGROUND: The background is discussed in the chapter, "Introduction."

3. ASSUMPTIONS:

(1) Estimated page count based on a sample TAB issue:

	Monthly	Quarterly	Semi-Annual	Annual
Acquisition List	112	-	-	-
Title Index	28	-	168	336
Report Number Index	35	-	210	420
Personal Author Index	64	-	414	828
Corporate Author Index	50	-	324	648
Contract Index	16	-	102	204
Total	305	-	1218	2436
Notice of Changes in Classification	-	200	-	800

(2) The current prescribed rate of 18% for leave accruals and 36.2% for fringe benefits was used as outlined in the Economic Analysis Manual, DLAM 7041.1, May 1985, page 7-3.

(3) The average size CAB was estimated to be 120 pages based on the belief that an intermediary's profile would be much larger than an end-user's profile.

(4) Cost of the new Xerox 9700 was prorated according to the percentage of time it will be used for CAB.

(5) The overhead rate was calculated at 100% of in-house labor cost and 10% of in-house material cost.

(6) The following estimates were used to calculate the weight of documents:

(a) 4 microfiche = 1 ounce

(b) 6.4 sheets paper (8-1/2" x 11") = 1 ounce

(7) The Acquisitions List would be stapled rather than bound as TAB is now.

4. ALTERNATIVES:

Alternative (1) Present Products -

- (a) TAB - 26 Issues - Hard Copy
- (b) TAB - 26 Issues - Microfiche
- (c) TAB Indexes - Annual - Microfiche
- (d) Notice of Changes in Classification - Annual Cumulation  
- Microfiche & Hard Copy

Alternative (2)

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy Printing Press	Xerox 9700
(a) Acquisitions List & 5 Indexes - 12 Monthly			X	
(b) Semiannual & Annual Cumulative Index		X		
(c) CAB - 26 Issues (1000 additional users)				X
(d) CAB - 26 Issues (2000 additional users)				
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)			X	

Alternative (3)

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy Printing Press	Xerox 9700
(a) Acquisitions List & 5 Indexes - 12 Monthly			X	
(b) Semiannual & Annual Cumulative Index		X		
(c) CAB - 26 Issues (1000 additional users)				X
(d) CAB - 26 Issues (2000 additional users)				
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)		X		

ALTERNATIVES: (Cont'd)

Alternative (4)

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
			Printing Press	Xerox 9700
(a) Acquisitions List & 5 Indexes - 12 Monthly			X	
(b) Semiannual & Annual Cumulative Index		X		
(c) CAB - 26 Issues (1000 additional users)				X
(d) CAB - 26 Issues (2000 additional users)				
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation	X			

Alternative (5)

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
			Printing Press	Xerox 9700
(a) Acquisitions List & 5 Indexes - 12 Monthly	X			
(b) Semiannual & Annual Cumulative Index		X		
(c) CAB - 26 Issues (1000 additional users)				X
(d) CAB - 26 Issues (2000 additional users)				
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation	X			

ALTERNATIVES: (Cont'd)

Alternative (6)

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
			Printing Press	Xerox 9700
(a) Acquisitions List & 5 Indexes - 12 Monthly	X			
(b) Semiannual & Annual Cumulative Index		X		
(c) CAB - 26 Issues (1000 additional users)				X
(d) CAB - 26 Issues (2000 additional users)				
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation		X		

Alternative (7)

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
			Printing Press	Xerox 9700
(a) Acquisitions List & 5 Indexes - 12 Monthly				
(b) Semiannual & Annual Cumulative Index				
(c) CAB - 26 Issues (1000 additional users)				
(d) CAB - 26 Issues (2000 additional users)				X
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation			X	



ALTERNATIVES: (Cont'd)

Alternative (8)

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
			Printing Press	Xerox 9700
(a) Acquisitions List & 5 Indexes - 12 Monthly				
(b) Semiannual & Annual Cumulative Index				
(c) CAB - 26 Issues (1000 additional users)				
(d) CAB - 26 Issues (2000 additional users)				X
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation	X			

Alternative (9)

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
			Printing Press	Xerox 9700
(a) Acquisitions List & 5 Indexes - 12 Monthly				
(b) Semiannual & Annual Cumulative Index				
(c) CAB - 26 Issues (1000 additional users)				
(d) CAB - 26 Issues (2000 additional users)				X
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation		X		

Initially, 15 alternatives were considered in this economic analysis. Alternatives 10, 11, and 15 would require that some products be produced in-house on microfiche. Even though the in-house microfiche production cost would be less than the contract cost, DTIC-D believes that they could not get a waiver to produce 2000 copies of a master microfiche. Therefore, Alternatives 10, 11, and 15 were dismissed.

ALTERNATIVES: (Cont'd)

Alternatives 12, 13, and 14 would use the Xerox 1075 to produce two products in-house. The production costs for the Xerox 1075 is \$20.40 per thousand compared to \$6.41 per thousand on the printing presses. Alternatives 12, 13, and 14 were dismissed on the basis of cost.

All 15 alternatives are shown in Appendix E along with their annual recurring costs.

5. COSTS DATA: The costs used in the analysis were divided into two categories - nonrecurring and recurring. Nonrecurring costs are those which are incurred on a one-time basis; whereas, recurring costs are those expenses which occur periodically. Labor, material, and maintenance costs were included in the analysis.

Tables 5 and 6 show the following annual recurring costs:

- (1) GPO Costs - TAB product only.
- (2) Negative Costs - The cost of producing a paper copy and the negative.
- (3) Production Costs - The in-house or contract cost of producing hard copy or microfiche. This does not include shipping room costs.
- (4) Shipping Costs - The costs to wrap and mail products. This does not include postage.
- (5) Postage.
- (6) Overhead - Overhead costs were applied to the functions performed in-house.

Table 7 summarizes the total annual recurring costs for each product.

Table 8 shows the total annual recurring costs for each alternative including a ranking by costs.

Table 9 lists the nonrecurring costs associated with this economic analysis.

TABLE 5

ANNUAL RECURRING COSTS FOR THE PRESENT  
ANNOUNCEMENT PRODUCTS - TAB, TAB ANNUAL INDEXES  
AND NOTICES OF CHANGES IN CLASSIFICATION

PRESENT PRODUCTS	
GPO Costs	\$ 30,000
Production Costs	133,910
Shipping	33,193
Postage	124,956
Overhead	121,994
<b>TOTAL</b>	<b>\$444,053</b>

TABLE 6

ANNUAL RECURRING COSTS FOR EACH PRODUCT

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
Acquisitions List & 5 Indexes			Printing Press	Xerox 9700
(a) Negative Costs	\$ 7,660	X	\$ 7,660	X
(b) Production Costs	50,421	X	46,921	X
(c) Shipping	10,319	X	10,319	X
(d) Postage	57,600	X	57,600	X
(e) Overhead	13,662	X	42,425	X
<b>TOTAL</b>	<b>\$139,662</b>	<b>X</b>	<b>\$164,925</b>	<b>X</b>

	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
Semiannual and Annual Cumulative Indexes			Printing Press	Xerox 9700
(a) Negative Costs	X	\$ 7,645	X	X
(b) Production Costs	X	5,428	X	X
(c) Shipping	X	2,044	X	X
(d) Postage	X	3,940	X	X
(e) Overhead	X	6,908	X	X
<b>TOTAL</b>	<b>X</b>	<b>\$25,965</b>	<b>X</b>	<b>X</b>



TABLE 6 (Cont'd)

## ANNUAL RECURRING COSTS FOR EACH PRODUCT

CAB (1000 Users)	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
			Printing Press	Xerox 9700
(a) Negative Costs	X	X	X	X
(b) Production Costs	X	X	X	\$ 71,953
(c) Shipping	X	X	X	11,310
(d) Postage	X	X	X	45,500
(e) Overhead	X	X	X	57,762
TOTAL	X	X	X	\$186,525

CAB (2000 Users)	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
			Printing Press	Xerox 9700
(a) Negative Costs	X	X	X	X
(b) Production Costs	X	X	X	\$126,443
(c) Shipping	X	X	X	22,352
(d) Postage	X	X	X	91,000
(e) Overhead	X	X	X	125,256
TOTAL	X	X	X	\$365,051

Notices of Changes in Classification	CONTRACT		IN-HOUSE	
	Hard Copy	Microfiche	Hard Copy	
			Printing Press	Xerox 9700
(a) Negative Costs	\$ 2,929	\$ 2,929	\$ 2,929	X
(b) Production Costs	19,201	1,824	17,948	X
(c) Shipping Costs	4,012	3,075	4,012	X
(d) Postage	22,660	2,440	22,660	X
(e) Overhead	5,282	4,444	16,284	X
TOTAL	\$54,084	\$14,712	\$63,833	X



TABLE 7  
TOTAL ANNUAL RECURRING COSTS FOR EACH PRODUCT

	Hard Copy	Microfiche	IN-HOUSE	
			Hard Copy	
			Printing Press	Xerox 9700
(a) Acquisitions List & 5 Indexes - 12 Monthly	\$139,662	X	\$164,925	X
(b) Semiannual & Annual Cumulative Index	X	\$25,965	X	X
(c) CAB - 26 Issues (1000 additional users)	X	X	X	\$186,525
(d) CAB - 26 Issues (2000 additional users)	X	X	X	365,051
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation	54,084	14,712	63,833	X

TABLE 8  
TOTAL ANNUAL RECURRING COSTS FOR EACH ALTERNATIVE

Alternative #	PRODUCTS*					TOS Personnel	Total	Ranking By Cost
	A	B	C	D	E			
1							\$444,053	4
2	\$164,925	\$25,965	\$186,525	-	\$63,833	39,198	480,446	9
3	164,925	25,965	186,525	-	14,712	39,198	431,325	3
4	164,925	25,965	186,525	-	54,084	39,198	470,697	8
5	139,662	25,965	186,525	-	54,084	39,198	445,434	5
6	139,662	25,965	186,525	-	14,712	39,198	406,062	1
7	-	-	-	\$365,051	63,833	39,198	468,082	7
8	-	-	-	365,051	54,084	39,198	458,333	6
9	-	-	-	365,051	14,712	39,198	418,961	2

\*

Product Codes

- a = Acquisitions List and 5 Indexes
- b = Semiannual and Annual Cumulative Indexes
- c = CAB (1000 users)
- d = CAB (2000 users)
- e = Notice of Changes in Classification

TABLE 9  
NONRECURRING COSTS

- (1) Purchase of Xerox 9700 - \$396,054
  - \$ 89,112 prorated cost to CAB (1000 Users) (applies to Alternatives 2-6)
  - \$178,224 prorated cost to CAB (2000 Users) (applies to Alternatives 7-9)
- (2) Programming changes TAB (Appendix F) including overhead
  - \$29,418 (applies to Alternatives 2-9)
- (3) Programming changes CAB - Citations/page (Appendix F) including overhead
  - \$14,726 (applies to Alternatives 2-9)

6. BENEFITS/LIMITATIONS: Benefits and limitations of the alternatives are discussed in the chapters, "Discussion of Alternatives" and "Discussion of Production Methods."

7. COMPARISON OF ALTERNATIVES

Present value analysis: A present value analysis was performed to determine which alternative would be less costly. The costs were examined over a 5 year time period. (See Table 10)

TABLE 10  
PRESENT VALUE ANALYSIS

Alternative #	Recurring Costs	Nonrecurring Cost	Total	Ranking By Cost
1	\$1,683,271	-	\$1,683,271	2
2	1,821,371	\$133,256	1,954,627	7
3	1,635,153	133,256	1,768,409	3
4	1,784,412	133,256	1,917,668	6
5	1,688,640	133,256	1,821,896	5
6	1,539,381	133,256	1,672,637	1
7	1,774,499	222,368	1,996,867	9
8	1,737,540	222,368	1,959,908	8
9	1,588,281	222,368	1,810,649	4

8. CONCLUSION: Of the nine alternatives considered in this analysis, it is believed that alternatives 2-6 would be preferred by DTIC users. Within these five alternatives, alternatives 3 and 6 ranked best in the present value analysis. Alternative 6 in which all of the work, except for the publication of CAB, is done on contract, ranks first. Alternative 3 in which all of the work, except for the products that would be supplied on microfiche, is done in-house, ranks third.

9. RECOMMENDATIONS: Alternative 3 should be selected because it would allow DTIC to keep more work in-house and would also give DTIC better control over the production of its announcement products.

## RECOMMENDATIONS

The committee recommends that:

- a. DTIC discontinue publishing TAB.
- b. DTIC provide intermediaries with a monthly unclassified comprehensive acquisitions list with indexes. It should be published in hard copy. DTIC should publish semiannual and annual cumulative indexes to the list on microfiche.
- c. DTIC encourage those end users and intermediaries who need subject access to DTIC's new acquisitions to enroll in the CAB program.
- d. DTIC publish the Notices of Changes In Classification, Distribution and Availability on a quarterly basis with the fourth quarter issue being an annual cumulation.
- e. DTIC expand the capability of its online system and work toward making DROLS more "user friendly".
- f. DTIC investigate the possibility of making announcement information available on floppy disks.
- g. DTIC explore the use of digital video disk applications.
- h. These recommendations be carried out in phases. Phased implementation would give DTIC time to reallocate its resources and would allow users time to adjust to the new products and services. We estimate that it would take approximately one year to phase out TAB and to phase in the new products.

### Phase 1

- a. Issue Notices of Changes in Classification, Distribution and Availability as a separate document.
- b. Promote the online announcement command @SNA@ so that all online users understand how they can go about creating their own announcement products.



- c. Develop a specific marketing plan to promote the acquisitions list.
- d. Initiate a prototype project to make announcement information available via floppy disks and a project to explore the use of digital video disk applications.
- e. Develop a plan and provide resources for the expansion of the computer system and for provision of "user friendly" access.

#### Phase II

- a. Provide for the resources necessary to expand the number of CAB users.
- b. Make the program changes needed for formatting the acquisitions list.

#### Phase III

- a. Implement the marketing plan to promote the acquisitions list.
- b. Initiate publication of the acquisitions list and indexes.
- c. Allow more users into the CAB program.
- d. Discontinue publication of TAB.

#### Phase IV

Evaluate user response to the acquisitions list and make any necessary adjustments within existing constraints.

#### Phase V

Carefully monitor the number of online users and prepare to phase out the acquisitions list and CAB at the appropriate time.

The estimated cost of producing a monthly acquisitions list with five indexes in hard copy, a semiannual and annual cumulative index on microfiche, an additional 1000 CABs and four issues of the Notices of Changes in Classification, Distribution and Availability is \$431,325 if the monthly

acquisitions list, its indexes and CAB were produced in-house, and \$406,062 if all products except CAB were produced on contract. The present cost of TAB, its annual index and the Notices of Changes in Classification, Distribution and Availability is estimated to be \$444,053.

As these cost estimates indicate, DTIC could implement these recommendations without incurring additional costs. The proposed acquisitions list and indexes together with the existing CAB program and the online announcement capability will provide an appropriate mix of announcement media that will satisfy the needs of DTIC's users until it is feasible to eliminate all print products and to provide announcement information solely by electronic means.

## CONCLUSIONS

The DTIC user community consists of "DoD components and their contractors, federal agencies, their contractors and the national and international scientific and technical community."<sup>9</sup> DTIC has traditionally served this diverse group through technical libraries. However, when the use of personal computers and computer networks becomes more widespread, greater numbers of users will be accessing the information that they need on their own. When the vast majority of DTIC users have their own terminals, the need for paper-based announcement products will be eliminated. However, until that time DTIC must produce print products for both the end user and the intermediary. Other large information centers such as the Department of Energy (DOE), NASA, NLM, and NTIS, continue to provide print announcement products to their users even though their databases are readily available to the general public through a variety of vendors. They recognize, as DTIC must, that they have an obligation to continue to serve all people who need information whether or not they have access to an online system.

To disavow print products and service to intermediaries and the large portion of our current and potential user community that is not online to DTIC on the premise that they ought to be online, or that we should be serving end users and not intermediaries would convey an elitist view of information support that is inconsistent with DTIC's goals of being information and user-oriented.

#### FOOTNOTES

<sup>1</sup>U.S. Department of Defense, DoD Scientific and Technical Information Program (Department of Defense Directive Number 3200.12 (Encl 3) 15 February 1983, (p. 1).

<sup>2</sup>Ellen McCauley. "Study of Announcement Alternatives - Progress Report," Inter-Office Memorandum. 14 June 1983, p. 1.

<sup>3</sup>Information supplied by Charles Hitt, DTIC-DDRB, 8 April 1985.

<sup>4</sup>Information supplied by Louis Williams, DTIC-DP, 18 June 1984.

<sup>5</sup>Ibid.

<sup>6</sup>Richard D. Douglas et al., DTIC 2000: A Corporate Plan for the Future (Alexandria, VA: Defense Technical Information Center, 1984) p. 6-3.

<sup>7</sup>Especially DDC: Users Look at the DoD Information Transfer Process (Washington, DC: Committee on Information Hang-ups, 1975). p. 5.

<sup>8</sup>"Data files on floppies coming soon from NTIS," Library Journal, CX, No. 1 (1985): 29.

"National Library of Medicine Offers Subsets of MEDLINE," Online Review, VIII, No. 6 (1984): 517-518.

<sup>9</sup>U.S. Department of Defense, DoD Scientific and Technical Information Program, (Department of Defense Directive Number 3200.12, 15 February 1983), p. 2.



## PERSONS INTERVIEWED

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David Tulip, NTIS  
David Whitman, OUSD (Policy)

### DTIC Users

Mary Albertson - E Systems, Melpar Division - 6 Jun 84  
Grace Ateil - Defense Communications Engineering Center - 8 Jun 84  
June Bates - Army Air Defense School Library, Ft. Bliss - 19 Jun 84  
Arlene Blose - Army Research Institute for Behavioral and Social Sciences -  
19 Jun 84  
Mary Bonnett - Army Library Management Office - 17 Dec 84  
Anne Davis - Air Weather Service Technical Library, Scott AFB - 12 Jun 84  
Margie Davis - STS Corp. - 14 Mar 85  
Mary Durant - Aviation Center, Ft. Rucker - 22 Jun 84  
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W. J. Hammett - Center for Naval Analyses - 14 Mar 85

Marilyn Harned - Naval Air Systems Command - 10 Jan 84  
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 Marilyn Johnson - AF Tactical Air Forces Interoperability Group,  
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 Yvonne Kinkaid - AF Systems Command, Andrews AFB - 13 Jun 84  
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 Linda Kuntz - Concepts Analysis - 10 Jan 85  
 Nina Lanzetta - AF Geophysics Lab - 3 Jul 84  
 Joanne Lappin - David W. Taylor Naval Ship R&D Center - 26 Jun 84  
 Jill Mercury - TRW - 4 Jun 84  
 Joan Nugent - Mantech - 1 Feb 85  
 Janice Pepper - Army Mobility Equipment R&D Command, Ft. Belvoir - 6 Jun 84  
 Patricia Prentice - Naval Air Systems Command - 10 Jan 85  
 Ann Rodgers - Naval Weapons Center, China Lake, CA - 12 Jul 84  
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 June Stercho - AF Armament Lab, Eglin AFB - 8 Jun 84  
 Barbara Stevens - US Army War College - 16 Jun 84  
 Marcia Stone - Army Library at the Pentagon - 12 Dec 84  
 Paula Strain - Mitre - 28 Jun 84  
 Kenneth L. Thoenes - Naval Research Lab - 14 Mar 85  
 Barbara West - AF Wright Aeronautical Labs, Wright-Patterson AFB - 12 Jun 84  
 Sandra Young - Defense Nuclear Agency - 25 Jan 85

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"National Library of Medicine offers subsets of Medline." Online Review, VIII, No.6 (1984), 517-518.

United States Department of Defense. Defense Scientific and Information Program. Directive Number 3200.12. February 15, 1983.

## Sample Acquisitions List Page

AD-B080 593L Armed Forces Medical Intelligence Center Fort Detrick Frederick MD. WOUNDING PROPERTIES OF TWO TYPES OF BULLETS ON SOFT TISSUES OF DOGS (LIANG CHUNG TAN WAN TUI KOU JUAN TSU CHIN CHIN SHANG T'IE TIEN), (U) by Y.C. Liu, P.C. Wu, K.P. Hsieh, T.C. Chen and C.K. T'ang. 12 Mar 84. 13p. Rept. no. GCMIS-WT-031-84. Unclassified report.  
Distribution limited to US Gov't agencies only. Proprietary Info: 19 Mar 84. Other requests must be referred to Armed Forces Medical Intelligence Center, Fort Detrick, Frederick, MD 21701.

AD-B080 607 COMPARISON OF METHODS FOR ESTIMATING PERCENT BODY FAT (U) by S. Nomiya, T. Komuro and K. Kikkawa. Nov 83. 15p. Rept. no. DRIC-T-7026, DRIC-BR-90145. Unclassified report.  
Distribution: DTIC users only.

AD-B080 608L Arnold Engineering Development Center Arnold AFS TN. TEST RESULTS FOR THE RESPONSE OF SINGLE- AND MULTI-COMPONENT STRUCTURAL ELEMENTS TO HYPERVELOCITY IMPACT (U). Final rept. 24 Mar-3 Apr 81, by C.J. Welsh. Jun 81. 28p. Rept. no. AEDC-TSR-81-719. Unclassified report.  
Distribution limited to US Gov't agencies only; Test and Evaluation; Jun 81. Other requests must be referred to Headquarters Space Div./YNAT, Los Angeles AFS, PO Box 92960, Worldway Postal Center, Los Angeles, CA 90009.

AD-B080 620L Rockefeller Univ New York. CHEMOTHERAPY OF HUMAN AFRICAN SLEEPING SICKNESS (U). Final rept. 1 Nov 79-Mar 82, annual rept. Oct 80-Mar 82, by E.A.H. Friedheim. Sep 82. 12p. Contract DAMD17-79-C-9148, Proj. 3M162770A871, Task AF. Unclassified report.  
Distribution limited to US Gov't agencies only; Test and Evaluation; 19 Mar 84. Other requests must be referred to Commander, US Army Research and Development Command, ATTN: SGRD-RMS, Fort Detrick, MD 21701.

AD-B080 638L Rockefeller Univ New York. CHEMOTHERAPY OF HUMAN AFRICAN SLEEPING SICKNESS (U). Annual rept. 1 Oct 79-30 Sep 80, by E.A.H. Friedheim. Feb 81. 44p. Contract DAMD17-79-C-9148, Proj. 3M162770A871, Task AF. Unclassified report.  
Distribution limited to US Gov't agencies only; Test and Evaluation; 19 Mar 84. Other requests must be referred to Commander, US Army Research and Development Command (Attn: SGRD-RMS), Fort Detrick, Frederick, MD 21701.

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## Appendix B

### SAMPLE INDEX PAGES

A field and group designator would replace the acronym GRA&I in the proposed indexes. These pages taken from an old unclassified TAB index serve only as a formatting sample.

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AD-A119 398 GRA&I

2500

\*Preventative maintenance has been changed to Tuesdays



Appendix D

Additional Personnel Requirements (DTIC-S)

30 JAN 1985

DTIC-S (E. Rhoad/46964/phs)

SUBJECT: Additional Personnel Requirements for Current Awareness Bulletin (CAB), Expanded FYs 86-87

TO: DTIC-M

1. Following is the information you requested in your IOM of 18 Jan 85. The "person-hours" are for a period of one year. These estimates are only for DTIC-SO and based on the following assumptions: (a) There are no format changes requiring program changes by DTIC-SD, (b) The current system (programs, documentation, procedures, Form 95's etc.) will be used to process 2,000 additional profiles each (2) weeks.

	<u>Hrs Saved By Eliminating TAB</u>	<u>CAB Increase</u>	<u>Net Increase</u>
Input Control	28	52	24
Output Control	56	780	724
Computer Oprns	<u>78</u>	<u>2210</u>	<u>2132</u>
Totals	<u>162</u>	<u>3042</u>	<u>2880</u>

The annual increase in "person-hours" is 2880.

2. The major problem confronting DTIC-SO is not the additional "person-hours" required but the additional computer hours (almost double) required to process CAB. Currently, we have a hard time scheduling CAB because of the volume of data to be sorted. We are unable to run CAB sorts concurrently with the DROLS system up and primarily run the CAB sorts in a serial mode. Doubling the CAB workload will cause serious scheduling problems with the current amount of mass-storage available for sorting.

3. If there are any further questions concerning this IOM, please contact Mr. Ernest Rhoad, X46964 or Ms. Mary Lynne Gearhart, X46917.

(Signed) Jerry B. Milstead

JERRY B. MILSTEAD  
Director, Directorate of  
Telecommunications and ADP Systems

MFR: Not Needed

Prepared by: E. Rhoad/DTIC-SO/46964/phs/29Jan85



## Appendix E

### Announcement Alternatives

#### ALTERNATIVES:

##### Alternative (1) Present Products -

- (a) TAB - 26 issues - Hard Copy
- (b) TAB - 26 issues - Microfiche
- (c) TAB Indexes - Annual - Microfiche
- (d) Notice of Changes in Classification  
Annual Cumulation - Microfiche & Hard Copy

##### Alternative (2)

	CONTRACT					Micro Fiche
	Hard Copy	Micro Fiche	Press	Hard Copy 1075	Xerox 9700	
(a) Acquisitions List & 5 Indexes - 12 Monthly			x			
(b) Semiannual & Annual Cumulative Index		x				
(c) CAB - 26 Issues (1000 additional users)					x	
(d) CAB - 26 Issues (2000 additional users)						
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)			x			

Appendix E (cont)

Alternative (3)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly			x			
(b) Semiannual & Annual Cumulative Index		x				
(c) CAB - 26 Issues (1000 additional users)					x	
(d) CAB - 26 Issues (2000 additional users)						
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)		x				

Alternative (4)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly			x			
(b) Semiannual & Annual Cumulative Index		x				
(c) CAB - 26 Issues (1000 additional users)					x	
(d) CAB - 26 Issues (2000 additional users)						
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)	x					

Appendix E (cont)

Alternative (5)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly	x					
(b) Semiannual & Annual Cumulative Index		x				
(c) CAB - 26 Issues (1000 additional users)					x	
(d) CAB - 26 Issues (2000 additional users)						
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)	x					

Alternative (6)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly	x					
(b) Semiannual & Annual Cumulative Index		x				
(c) CAB - 26 Issues (1000 additional users)					x	
(d) CAB - 26 Issues (2000 additional users)						
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)		x				

Appendix E (cont)

Alternative (7)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly						
(b) Semiannual & Annual Cumulative Index						
(c) CAB - 26 Issues (1000 additional users)						
(d) CAB - 26 Issues (2000 additional users)					x	
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)			x			

Alternative (8)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly						
(b) Semiannual & Annual Cumulative Index						
(c) CAB - 26 Issues (1000 additional users)						
(d) CAB - 26 Issues (2000 additional users)					x	
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)	x					



Appendix E (cont)

Alternative (9)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy			
			Press	1075	Xerox 9700	
(a) Acquisitions List & 5 Indexes - 12 Monthly						
(b) Semiannual & Annual Cumulative Index						
(c) CAB - 26 Issues (1000 additional users)						
(d) CAB - 26 Issues (2000 additional users)					x	
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)		x				

Alternative (10)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly			x			
(b) Semiannual & Annual Cumulative Index						x
(c) CAB - 26 Issues (1000 additional users)					x	
(d) CAB - 26 Issues (2000 additional users)						
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)			x			

Appendix E (cont)

Alternative (11)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly			x			
(b) Semiannual & Annual Cumulative Index						x
(c) CAB - 26 Issues (1000 additional users)					x	
(d) CAB - 26 Issues (2000 additional users)						
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)						x

Alternative (12)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly				x		
(b) Semiannual & Annual Cumulative Index						x
(c) CAB - 26 Issues (1000 additional users)					x	
(d) CAB - 26 Issues (2000 additional users)						
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)				x		

Appendix E (cont)

Alternative (13)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly				x		
(b) Semiannual & Annual Cumulative Index						x
(c) CAB - 26 Issues (1000 additional users)					x	
(d) CAB - 26 Issues (2000 additional users)						
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)						x

Alternative (14)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Hard Copy		Xerox 9700	
			Press	1075		
(a) Acquisitions List & 5 Indexes - 12 Monthly						
(b) Semiannual & Annual Cumulative Index						
(c) CAB - 26 Issues (1000 additional users)						
(d) CAB - 26 Issues (2000 additional users)					x	
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)				x		

Appendix E (cont)

Alternative (15)

	CONTRACT		IN-HOUSE			Micro Fiche
	Hard Copy	Micro Fiche	Press	Hard Copy 1075	Xerox 9700	
(a) Acquisitions List & 5 Indexes - 12 Monthly						
(b) Semiannual & Annual Cumulative Index						
(c) CAB - 26 Issues (1000 additional users)						
(d) CAB - 26 Issues (2000 additional users)					x	
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)						x



Appendix E (cont)

Total Annual Recurring Costs For Each Product

CONTRACT						
	Hard Copy	Micro Fiche	Hard Copy			Micro Fiche
			Press	1075	Xerox 9700	
(a) Acquisitions List & 5 Indexes - 12 Monthly	\$139,662	x	\$164,925	\$322,931	x	x
(b) Semiannual & Annual Cumulative Index	x	\$25,965	x	x	x	\$24,626
(c) CAB - 26 Issues (1000 additional users)	x	x	x	x	\$186,525	x
(d) CAB - 26 Issues (2000 additional users)	x	x	x	x	\$365,051	x
(e) Notice of Changes in Classification (3 Quarterly & 1 Annual Cumulation)	\$57,013	\$14,712	\$63,833	\$124,273	x	\$14,559

# Appendix E (cont)

## Total Annual Recurring Costs for All Alternatives

Alternative	PRODUCTS*					TOS	Total	Ranking By Cost
	A	B	C	D	E	Personnel		
1				-			\$444,053	4
2	\$164,925	\$25,965	\$186,525	-	\$ 63,833	\$39,198	\$480,446	12
3	\$164,925	\$25,965	\$186,525	-	\$ 14,712	\$39,198	\$431,325	6
4	\$164,925	\$25,965	\$186,525	-	\$ 54,084	\$39,198	\$470,697	10
5	\$139,662	\$25,965	\$186,525	-	\$ 54,084	\$39,198	\$445,434	7
6	\$139,662	\$25,965	\$186,525	-	\$ 14,712	\$39,198	\$406,062	1
7	-	-	-	\$365,051	\$ 63,833	\$39,198	\$468,082	9
8	-	-	-	\$365,051	\$ 54,084	\$39,198	\$458,333	8
9	-	-	-	\$365,051	\$ 14,712	\$39,198	\$418,961	3
10	\$164,925	\$24,626	\$186,525	-	\$ 63,833	\$39,198	\$479,107	11
11	\$164,925	\$24,626	\$186,525	-	\$ 14,559	\$39,198	\$429,833	5
12	\$322,931	\$24,626	\$186,525	-	\$124,273	\$39,198	\$697,553	15
13	\$322,931	\$24,626	\$186,525	-	\$ 14,559	\$39,198	\$587,839	14
14	-	-	-	\$365,051	\$124,273	\$39,198	\$528,522	13
15	-	-	-	\$365,051	\$ 14,559	\$39,198	\$418,808	2

### Product Codes

- A= Acquisitions List and 5 Indexes
- B= Semiannual and Annual Cumulative Indexes
- C= CAB (1000 additional users)
- D= CAB (2000 additional users)
- E= Notice of Changes in Classification

Appendix F

DTIC-SDD, Programming Estimates

15 July '85

To: Richard Evans

See the attached sheets for the estimates you requested on 12 July.

In summary:

1. Wade Cook has determined that it will require a total of 600 hours to provide a tape substitute for the TAB and the quarterly/annual notices to be printed in-house. Please note that resources for TAB indexes are not requested, and this was not addressed. Effort can not begin until well into 1986.

2. It is estimated that to change the CAB format program to print more than 2 citations per page will require a total of 320 hours.

Powhatan Moncure

## Appendix F (cont)

### Input System - Estimates for TAB Alternatives

Analysis: 80  
Design: 80  
Coding: 200  
Testing: 160  
Documentation: 80  
600 hours

Start date: June 86  
Completion date: Dec 86  
Personnel required: 1 programmer GS-11 400 hours  
1 analyst GS-12 200 hours

Estimates are all based on the availability of programming personnel familiar with the TR system, the priority tasks already established and the testing turn-around time through computer operations.

### Output Products - Estimates for Changes to Bib (CAB) Formatting to "let the citations run on"

Analysis: 40  
Design: 40  
Coding: 140  
Testing: 60  
Documentation: 40  
320 hours

Start date: Sept 85  
Completion date: Jan 86  
Personnel: 1 programmer GS-11

Based on preliminary analysis, it appears that these changes will necessitate major surgery on the basic structure of the CAB format program.